Remarks

Thorough examination by the Examiner is noted and appreciated.

Applicants have amended their claims.

No new matter has been added.

For example support for the amendments is found in the originally filed claims, the Figures (e.g., Figure 1 and 5) and the Specification. (note paragraph references are to published version of Specification US 2005/0216370).

[0003] Typically, existing order promising systems within a wafer fabrication facility do not have the capability to accurately fulfill a customer's order on a customer requested date or within a time period that a customer requests. Instead, forecasts are generated to predict future order demands. However, the forecasts are not based on real-time events relating to facility operations, but instead are based on past practices, data and experiences of facility operations and facility personnel. Existing forecasting systems do not provide a dynamic feedback system to determine allocated capacity and constraints within a manufacturing facility. Thus, **using an existing system a fabrication facility's processing capacity cannot be fully utilized in an efficient manner.**

[0030] A **plurality recovery trend parameters are calculated as a statistical variation from the baseline recover trend parameter,**

wherein the statistical variation may be a standard deviation from the baseline value or alternatively, a factor added to or multiplied by the baseline recovery trend parameter. In another preferred embodiment, the baseline recovery trend parameter may vary from each of the plurality of recovery trend parameters by a constant value or a factor of a constant value, alternatively **each of the plurality of recovery trend parameters may vary from the baseline recovery trend by a sigma variance.** However, any conventional statistical variation may be used to calculate each of the plurality of recovery trend parameters using an optimal baseline recovery trend parameter.

[0111] **An optimal recovery trend parameter and associated total accuracy may be determined (step 40) by locating a maximum point on the curve,** wherein the maximum point on the curve indicates a maximum total accuracy of an optimal recovery trend parameter, and wherein the optimal recovery trend parameter for the shipping week having the associated plotted recovery trend values may be determined by associating a maximum point on the Y axis of the curve with an associated point on the X axis of the curve. The optimal recovery trend parameter may **also be determined by calculating the derivative of the polynomial formula F (x,y) or the tangent of the curve.**

Request for Information

Applicants respectfully state that they do not understand Examiners request for information. Applicants invention and the associated generation of the mathematical relationship in claims 5, 8 and 9 is fully explained in Applicants specification. The generation of the mathematical relationships in claims 5, 8 and 9 is an embodiment of Applicants invention.

Claim Objections

The claims have been amended to overcome Examiners objections.

Claim rejections under 35 U.S.C. 112

The claims have been amended to overcome Examiners rejections.

Claim rejections under 35 U.S.C. 101

The claims have been amended to overcome Examiners rejection.

Claim Rejections under 35 U.S.C. §103

1. Claims 1-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shipman (US 5,819,232).

Shipman discloses a method and apparatus using a computer model to determine a demand forecast for a product using an optimized historical weighting factor, determining an upper and lower bound of a planned inventory by accounting for customer order lead time, and computing a production schedule at predetermined intervals to maintain an actual inventory between the upper and lower bounds (see Abstract).

Thus, Shipman fails to disclose or suggest the following elements of Applicants invention including those elements in **bold type**:

" A method of **modifying a shipping date forecast** of a product manufactured in a fabrication facility **to improve an efficiency of utilization of a processing capacity** comprising the steps of:

using previously determined fabrication performance data to develop a baseline recovery trend parameter, wherein the recovery trend parameter **operates to modify a pre-defined efficiency value of the fabrication facility to generate a modified shipping date forecast** for fabricated products fabricated within the fabrication facility;

generating a plurality of second recovery trend parameters based on said first recovery trend parameter to generate a plurality of modified shipping date forecasts;

comparing an actual shipping date to said plurality of modified shipping date forecasts to determine a relative accuracy value of said baseline and said second recovery trend parameters; and,

performing regression analysis on said relative accuracy
values to determine an optimal recovery trend parameter to make
future shipping date forecasts to improve utilization of a
processing capacity of said fabrication facility."

Any modification of the method of Shipman in an effort to
produce Applicants invention would change the **principle of
operation** of the method of Shipman (computing a production
schedule at predetermined intervals to maintain an actual
inventory between the upper and lower bounds) and would make the
method of Shipman **unsatisfactory for its intended purpose**
(computing a production schedule at predetermined intervals to
maintain an actual inventory between the upper and lower bounds).

See MPEP 2143.01

**THE PROPOSED MODIFICATION CANNOT
RENDER THE PRIOR ART UNSATISFACTORY
FOR ITS INTENDED PURPOSE**
If proposed modification would render the prior art
invention being modified unsatisfactory for its
intended purpose, then there is no suggestion or motivation
to make the proposed modification. *In re Gordon*,
733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

**THE PROPOSED MODIFICATION CANNOT
CHANGE THE PRINCIPLE OF OPERATION
OF A REFERENCE**
If the proposed modification or combination of the
prior art would change the principle of operation of

> the prior art invention being modified, then the teachings
> of the references are not sufficient to render the
> claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810,
> 123 USPQ 349 (CCPA 1959).

Moreover, any proposed modification of Shipman would not produce Applicants invention.

"**First**, there must be some **suggestion or motivation**, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. **Second**, there must be a **reasonable expectation of success**. **Finally**, the prior art reference (or references when combined) **must teach or suggest all the claim limitations**. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." *In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).*

Conclusion

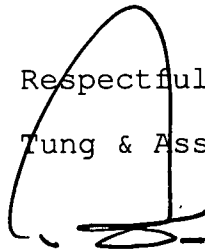The cited reference fails to produce or suggest Applicants

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invention, and therefore fails to make out a *prima facie* case of obviousness.

Applicants have amended their claims.

Based on the foregoing, Applicants respectfully submit that Applicants Claims are now in condition for allowance. Such favorable action by the Examiner at an early date is respectfully solicited.

In the event that the present invention as claimed is not in a condition for allowance for any other reasons, the Examiner is respectfully invited to call the Applicants representative at his Bloomfield Hills, Michigan office at (248) 540-4040 such that necessary action may be taken to place the application in a condition for allowance.

Respectfully submitted,
Tung & Associates

Randy W. Tung
Reg. No. 31,311